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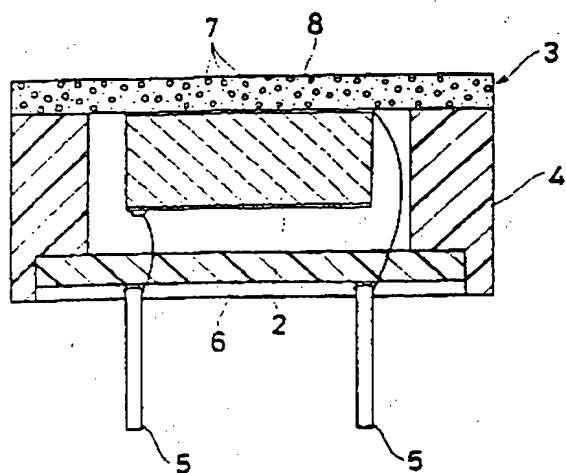
APPLICATION DATE : 08-11-88
APPLICATION NUMBER : 63281636

APPLICANT : MURATA MFG CO LTD;

INVENTOR : MAKINO SHIRO;

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TITLE : TRANSDUCER FOR ATMOSPHERIC ULTRASONIC WAVE



ABSTRACT : PURPOSE: To improve the reliability and deterioration in the characteristic with respect to ambient temperature by containing a vibrator in a case, providing a sound matching layer to an ultrasonic wave radiation face of the vibrator and forming the acoustic matching layer by a foamed inorganic material.

CONSTITUTION: A vibrator 2 is contained in a case 4 and an acoustic matching layer 3 is provided to an ultrasonic wave radiation face of the vibrator 2. Then the acoustic matching layer 3 is made of a foamed inorganic material. As the foamed inorganic material, an inorganic material has air bubbles and is low in the density, then the acoustic impedance is low and then the material acts like the acoustic matching layer 3. Thus, the acoustic matching layer 3 is not softened even at a high temperature environment in excess of the temperature range used normally and the thermal expansion coefficient is small and close to the thermal expansion coefficient of a piezoelectric ceramic used for the vibrator, then the distortion exerted to the bonding face with the vibrator is reduced.

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